

U.S. Patent Application Serial No. 10/551,356

Response filed October 7, 2010

Reply to OA dated July 12, 2010

**REMARKS**

Claims 4-8 are pending in this application, with claims 5, 6 and 8 withdrawn from consideration. Claims 4 and 5 are amended herein. Upon entry of this amendment, claims 4-8 will be pending, with claims 5, 6 and 8 withdrawn from consideration. Entry of this amendment and reconsideration of the rejections are respectfully requested.

No new matter has been introduced by this Amendment. Support for the amendments to the claims is discussed below.

**Claims 4 and 7 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** (Office action paragraph no. 2)

The rejection is overcome by the amendment to claim 4. Claim 4 has been amended to replace the term “dot-like molten metal” with –spherical molten metal droplets--. Support for this amendment may be found, for example, at page 2, lines 14-21, of the specification.

**Claims 4 and 7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Miller et al. (US 5,289,975) in view of Yamada (US 2003/0051851) and JP 2001-293551 all previously cited, and also in view of Olsson et al. (US 3,840,623).** (Office action paragraph no. 4)

Reconsideration of the rejection is respectfully requested in view of the clarifying amendment to claim 4.

Yamada (US2003/0051851) discloses, in Figure 7, a pressing body (20A).

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However, the pressing body of Yamada does not include a curved surface shaped inner wall which forms a focal point at a discharge port or in the vicinity of said discharge port. That is, the shape of the inner wall (20B) of the pressing body of Yamada is same as the shape of the inner wall of the discharge port (Fig. 8).

Therefore, Yamada dose not form a "focal point at said discharge port or in the vicinity of said discharge port" as recited in claim 4.

JP2001-293551 discloses a discharge nozzle (12) including a curved surface shaped inner wall (Fig. 2). However, JP2001-293551 dose not disclose a pressing body for pressing the molten metal. In JP2001-293551 there is no pressing by a pressing body, but an introduction of inert gas from the introduction port 12a.

Therefore, JP2001 -293551 also does not form a "focal point at said discharge port or in the vicinity of said discharge port" as recited in claim 4.

The present invention concentrates the pressure applied by the pressing body on the discharge port of the discharge nozzle, thereby generating high pressure portion in the vicinity of the focal point, and the "spherical molten metal droplets" can be jetted from the discharge port by the pressure.

Thus, neither Yamada nor JP2001-293551 discloses or suggests the structure to concentrate the pressure applied by the pressing body on the discharge port of the discharge nozzle, and therefore, claims 4 and 7 are not obvious over Yamada and JP2001-293551, taken separately or in combination.

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**Regarding withdrawn claim 5**

Applicant respectfully requests rejoinder of withdrawn claim 5, which is withdrawn on the basis of the election of Species II in the response to the Election of Species requirement (December 17, 2009). Applicant submits that upon allowance of claim 4, which reads on Species II, claim 5, directed to an additional species, is entitled to consideration.

Withdrawn claim 5 has been amended for clarity to replace the term “dot-like molten metal” with –spherical molten metal droplets--.

Claim 4 recites: "the discharge nozzle includes a curved surface shaped inner wall which forms a focal point at said discharge port or in the vicinity of said discharge port." The present invention concentrates the pressure applied by the pressing body on the discharge port of the discharge nozzle. Claim 5 recites: "said pressing body includes a curved surface shaped inner wall which forms a focal point at said discharge port or in the vicinity of said discharge port." Claims 4 and 5 disclose the structure to concentrate the pressure applied by the pressing body on the discharge port of the discharge nozzle, and the above arguments regarding the rejection of claim 4 are applicable to claim 5.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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